The Development of the Urban-Rural Fringe: A Literature Review

Research and Working Paper No. 3

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by Deborah Lyon
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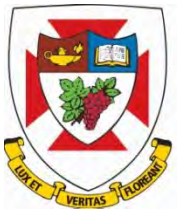

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RESEARCH AND WORKING PAPERS □3

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In November, 1982 the Institute of Urban Studies (IUS) approached the Manitoba Department of Urban Affairs with a proposal to conduct a study which would update available data and analysis pertaining to development in the urban fringe of Winnipeg. It had been indicated to the Institute by a number of sources that little analysis had been done in this area since 1977, despite strong indications that recent developments such as the deteriorating economic climate, higher land prices and increasing energy costs had greatly altered the local urban fringe development picture.

The Department expressed initial interest in the research concept and negotiations began concerning possible funding of such a study by Urban Affairs. In March, 1983 IUS signed a contract with Urban Affairs to conduct a study. There were two major alterations from the original research proposal, however. The first was that the study was to be split into two parts, with the Institute conducting the first part and preparing the research tools for the second part which would be undertaken and completed by Urban Affairs student researchers. The second alteration was that particular emphasis in the study was to be placed on the Winnipeg Additional Zone concept, in order to assist the Department in assessing the proposed Plan Winnipeg and in reviewing relevant sections of the City of Winnipeg Act.

This report represents the completion of the IUS portion of the study. It reflects the particular concerns identified by the Department of Urban Affairs. The report, which is divided into two parts, focusses in Part II on the fringe municipalities identified to be of primary interest to the Department -- the Rural Municipalities of Rosser, Macdonald, Ritchot, Tache, Springfield, East St. Paul, West St. Paul and St. Andrews (see Map 1).

Concerning the contents of the two parts of the report, in Part I an extensive review is provided of available literature on fringe development, and in particular, on the major factors behind the fringe development process. Emphasis is placed on Canadian, and where possible, Manitoba sources. In Part II issues revealed in the literature review which require further analysis in the Winnipeg context and specific concerns cited by Urban Affairs, are

MAP 1

Study Area

identified. These issues generally relate to the Additional Zone and to factors causing urban fringe development in the Winnipeg area. The research instruments and data sources for examining these issues are then detailed and assessed and the means for utilizing the instruments and data are described.

1.0 DEVELOPMENT OF THE URBAN-RURAL FRINGE: A Literature Review

INTRODUCTION

The 1960's and 1970's witnessed increasing interest in the phenomenon of development at the urban-rural fringes of Canadian cities. Planners, politicians, researchers and rural and urban dwellers viewed with mixed perspectives the growing urban presence in the countryside.

In particular, attention focussed on the effects of exurbanite settlement in rural areas -- on the spate of hobby farms, country estates and residential subdivisions that emerged on farm land, wildlife habitat and other rural spaces in often haphazard, dispersed fashion. Place names such as Ontario's Niagara region and British Columbia's Okanagan Valley became synonymous with the negative consequences associated with fringe development, especially as these related to Canada's agricultural sector.

The loss and fragmentation of prime farm land, and the impact of development on the economic viability of farming operations in fringe areas, were not the only concerns. Rising rural land prices, property tax inequities, public servicing of scattered development, land-use conflicts, socio-political tensions between 'new' and 'old' residents of rural areas, and disruption of the environment were among other important issues raised by fringe development.

The phenomenon was not one exclusive to Canada, nor was it exclusive to the areas surrounding major metropolitan centres. Moreover, it was not a new occurrence. Rural municipalities adjacent to Winnipeg, for example, experienced a boom in development at the turn of this century stemming from the introduction of a streetcar system and the unbounded enthusiasm about the city's potential for growth and prosperity.

What attracted attention in the 1960's and 1970's, however, were the pace of development and the patterns of exurbanite settlement. Propelled by a new level of affluence, the accessibility afforded by improved communications and transportation technologies, and by socio-cultural factors (the back-to-the-land movement, the search for improved quality of life), people began moving to rural areas in significant numbers. In some cases this reversed a previous trend of rural depopulation.

As politicians, planners and researchers attempted to sort out the costs and benefits associated with this and other types of fringe development, some key questions emerged:

(1) Were the developments, spurred by the short-term interests of individual actors, rapidly foreclosing options for future uses of the land -- uses that may be in the long-term public interest?

(2) Should development at the fringe be better controlled and, if so, how?

(3) What impact would the existing patterns of settlement have on future ability to plan fringe development? What flexibility, in terms of future planning options, had been foregone?

More recently, additional questions have arisen concerning the effects of changes in demographic, economic, technological and lifestyle factors on the trends observed in the 1960's and 1970's. Were the rate of fringe development and the nature of settlement temporary phenomena of those times? How much have higher energy and mortgage costs, and changes in the population structure, affected the desire and/or ability of people to move to, or remain in, the fringe areas? What impact might the new computer-telecommunications technologies have on future settlement patterns?

1.1 This Review

The purpose of this paper is to review available literature on fringe development, and in particular, to identify key factors behind the development process. The emphasis is on Canadian and, where possible, Manitoba references. Selected sources from other jurisdictions also are used. In the case of U.S. sources, note is made of Mercer's (1979)

cautions regarding important differences between Canadian and American cities that should not be overlooked in assessing fringe development.

In general, some of the more recent literature has continued to focus on the effects of the kind of development that occurred at the fringe in the 1970's. However, a body of theoretical work has emerged concerning the potential impact of demographic, economic and technological developments in the 1980's. These latter assessments reflect distinct divergences between researchers who project such developments will lead to more concentrated settlement forms and those who project continued dispersal of populations.

Among the empirical studies that have been undertaken, Gayler (1982b), for example, examines how changing demographic and economic factors have contributed to a decline in the rate of rural land conversion to urban uses in the Niagara region of Ontario, and to the consequent political and planning problems that are arising due to excessive designation of land for future urban use. In the Winnipeg region, background studies for the Rural Municipality of Springfield's development plan note a marked decrease in the rate of development in the RM in 1979-80. The planning implications of higher energy prices, lower demand for new housing and demographic trends are also discussed (Palubeskie, 1979c).

By its nature, a literature review only highlights a limited number of key points. For detailed examination of issues related to fringe development, three sources are most useful: (1) a compilation of papers by Canadian geographers entitled The Rural-Urban Fringe: Canadian Perspectives (1981), edited by K.B. Beesley and L.H. Russwurm; (2) a comprehensive series of studies on land use in Canada prepared for the Lands Directorate of Environment Canada, selected titles of which are listed in the bibliography attached to this paper; and (3) background studies and development plans prepared by the City of Winnipeg, and by some of the rural municipalities adjacent to the city, selected titles of which are also listed in the bibliography.

2.0 THE URBAN-RURAL FRINGE: DIMENSIONS AND SYSTEMS

The apparent simplicity of the phrase, the 'urban-rural fringe', belies the complexity of processes and actors involved in what essentially is a zone of physical interface and human/environmental interaction -- hence, a zone of transition with all the potential for disruption, uncertainty, conflict and opportunity that transition can entail. Urbanization might be the main or initial process, but it is not the sole force behind the creation of the fringe. Rural-based influences also are involved in the cause-effect relationships, given that rural societies have their own goals and socio-economic concerns apart from those of urban centres. Moreover, there is more than one 'fringe'. That is, there are areas where urban processes and actors dominate; areas where the predominant influences are rural; and areas that are a kind of 'every-man's land', no longer rural but not yet urban (Coleman, 1977; Gertler and Crowley, 1977; Russwurm, 1977, 1980; Simmons, 1981; Troughton, 1981).

To illustrate this complexity, Troughton (1981, p. 236) defines the urban-rural fringe as:

> ...an open, process-response system, in which the centrifugal and centripetal forces of urbanization and the contrast between economic and social utilities results in a set of socio-economic accessibility and land-use characteristics that collectively describe a distinct internal morphology. The boundaries of the system fluctuate over space and time reflecting the strength of 'fringe processes' and the nature of the bounding urban and countryside systems.

Other writers are not prepared to accept such a neutral definition of the fringe, however. Coleman (1977, p. 29), for example, suggests that what she calls the urban fringe

> ...is best understood as a broad but temporary mobile belt, wastefully consuming farmscape at its outer edge and expensively being converted to townscape at its inner edge. In the years that elapse between the successive passage of these two edges through any given point, it has been the scene of hopes, satisfactions, and subsequent disappointments, the scene of profiteering, lost livelihoods, and environmental despoliation, the scene of a colossal haphazardness. It has been

> the mid-twentieth century's experimental type of settlement, made possible by the combination of affluence and automobility, and as the century draws into its last quarter we are approaching a general consensus that the experiment has failed....It has failed on a grandiose scale, since it has coincided with the period of most rapid population growth in Canada and also with the period of most rapid urbanization.

2.1 Geographical Dimensions

An array of terms has been used to describe the locational, distance and time dimensions of the urban-rural fringe. Based on Russwurm (1977, 1980), the following terms frequently are used in Canada:

(1) Inner fringe -- an area adjacent to the built-up city and its suburban zone where most building additions to the city will occur. McCuaig and Manning (1982) suggest this area seldom extends more than 10 kilometres from the contiguous built-up area; that it is often within the administrative boundaries of urban centres; and that it may already be serviced by trunk water and sewer lines in anticipation of growth. In addition, it is the area where the urban land market is dominant. Residential, commercial, industrial, transportation and power facilities may be located here.

(2) The commuting zone -- an area extending 80 kilometres or more (a drive of 45 minutes to one hour) from the built-up edge of metropolitan centres, and lesser distances for smaller cities and towns. This zone includes the outer fringe and the urban shadow, and it features competitive urban and rural land uses: agriculture, rural non-farm residences, hobby farms, recreation sites, mobile-home parks, aggregate and quarry mineral operations, towns and villages, and other land uses. Some authors define an 'urban field' extending 80 to 160 kilometres from metropolitan areas as an intervening zone between the urban shadow and the rural area (Gertler and Crowley, 1977; van Til, 1979). In the mid-1970's, the Winnipeg Region Study Group defined the Winnipeg commutershed as roughly within a 48-kilometre radius of the city. More recent work suggests the

zone is more compact -- 16 to 24 kilometres (Winnipeg Tri-Level Committee on Urban Affairs, 1978b).

These zones are not subject to precise definition but, rather, are affected by considerations of topography, population size and density, land use, land ownership characteristics, land prices, climate, transportation links, planning controls and other factors. Moreover, their spatial form is not subject to neat delineation since it may reflect concentric accretionary growth in the inner fringe, linear or corridor growth using the fringe of one or more centres, satellite cities in the outer fringe or urban shadow, or some combination of these forms (Gertler and Crowley, 1977; Russwurm, 1977).

2.1.1 The Winnipeg Additional Zone

A unique geo-political feature among Canadian cities, the Additional Zone was established in 1961 to give the then Metropolitan Corporation of Greater Winnipeg planning control over an area extending about eight kilometres from the city's boundaries. The zone was designed to contain the area of Metro Winnipeg, to prevent urban sprawl and to provide open space within reasonable distance of the city (Palubeskie, 1977; Selwood, et al., 1981; Winnipeg Department of Environmental Planning, 1982).

The zone encompasses 282 square miles (in contrast to the city's 220 square miles), including the entire area of the rural municipalities of West St. Paul and East St. Paul, plus portions of Springfield, Tache, Ritchot and Macdonald. It initially incorporated a larger area. St. Andrews and St. Clements, however, withdrew from the zone in 1967 (Moses, 1979), and Rosser opted out in 1980 (Winnipeg Department of Environmental Planning, 1982).

The 1971 City of Winnipeg Act confirmed the concept of the Additional Zone. Until 1974 and the passage of Winnipeg By-law 422/73, the zone was designated as an area of no urban expansion. However, under the by-law amending the Greater Winnipeg Development Plan, some 68 square miles of the zone were designated for limited urban expansion, allowing rural residential development. Plan Winnipeg (Draft By-law 2960/81) essentially reaffirms without modification this amendment and the decision-making

structure concerned with Additional Zone matters. The Plan has not yet received formal passage but has been adopted as interim city policy (Winnipeg, Minutes of the City of Winnipeg Council, November 17, 1982).

The efficacy of the Additional Zone concept, and of the extent of the area designated for limited urban expansion, has come under increasing critical scrutiny in recent years (Palubeskie, 1977; Selwood, et al., 1981; Winnipeg Department of Environmental Planning, 1982; letter to Mayor William Norrie, Winnipeg, from Eugene Kostyra, Minister for Urban Affairs, Manitoba, October 27, 1982). These issues will be addressed in a subsequent section of this paper.

2.2 Natural, Economic and Cultural Systems at the Fringe

The dimensions of location, distance and time tell only a part of the story of the urban-rural interface in fringe areas. Consideration also must be given to the interaction of the natural environment and human systems (economic, socio-cultural, political).

Each element of the natural environment is under stress in fringe areas, be it the water, soil or vegetative resources, the mineral resources, wildlife, or scenery and other amenities. Agricultural, recreational, residential, industrial, commercial and other interests place multiple, often conflicting demands on natural resources.

> The over-riding fact about the natural environment of the urban fringe is that it is both highly perishable and under pressure. The spread of human settlement into the urban field has not been sufficiently selective. The view of the land as a commodity has predominated over the concept of the land as a resource. Consequently, the toll in terms of irretrievable environmental losses has been heavy. (Gertler and Crowley, 1977, p. 275)

Underlying the consequent issues of resource management and preservation are the conflicts and trade-offs arising from the 'collective action problem' (individual versus collective actions, private versus public goods), from equity versus efficiency considerations, from economic versus cultural values (including aesthetic and ecological values), and

from different perspectives concerning present and/or future potential land uses (Furuseth and Pierce, 1982; Prevost, 1982; Russwurm, 1980).

As Russwurm (1980, p. 465) emphasizes, the economic system is

> ...pivotal in these conflicts in the urban fringe and elsewhere. Man has to make a living by exploiting natural and human resources....The economic aspects of the concepts of location, 'highest' use, and individual action have largely determined what land-use activities exist where in the urban fringe....The economic or profit way of doing things is important; it has provided man with many benefits. Increasingly and paradoxically, however, the dominance of the economic environment is challenged by needs to protect the natural environment and by cultural needs which can only be met because of the relative success of the operations of the economic environment.

Those "needs" emerging from the socio-cultural system have attracted increasing attention, especially as it has become evident that population and economic growth in the 1960's and 1970's were not the only factors behind fringe development. Changing lifestyles, a search for improved quality of life, and increasing interest in environmental quality were reflected in the rates of exurbanite settlement in rural areas, demands for more recreational opportunities at the fringe, and involvement of conservationists in land and other resource-use issues (McRae, 1981; Palubeskie, 1979b; Paterson Planning and Research Ltd., 1973; Phipps, 1981; Pitura, et al., 1974; University of Manitoba, Department of City Planning, 1974; Winnipeg Department of Environmental Planning, 1978a).

Another aspect of the socio-cultural system that has received attention are the potential conflicts that can arise between individuals and groups as a result of development pressures. These conflicts, for example, can be between farmers and exurbanite residents or recreationists; between 'new' residents with urban-oriented ideas and demands and 'old' residents who prefer things to remain as they have been in the past; or between farmers/residents and speculators or resource-extraction interests (Beesley, 1981; McRae, 1980).

Not infrequently, the competing interests involved in fringe development turn to the political system for resolution of their problems. But the system's capacity to respond may be affected by: (1) divided administrative and political jurisdictions between school boards and government bodies at the local, regional (in some provinces) and provincial levels; and (2) political conflict. For example, Batey Smith (1981, p. 211-212) observe that:

> Political conflict is endemic in fragmented and expanding metropolitan areas. The exigencies of urban growth and economic expansion, in combination with the importance attached to the property tax, invoke intense competition for raw and developed land.

Moreover, these conflicts are not exclusive to an era of growth and prosperity. Recent reductions in the rate of economic and population growth have added a 'zero-sum' dimension to the competition and conflict between local governments, since one area's gain is another's loss (Gayler, 1982a, 1982b; Goldberg and Webster, 1979).

If the above comments seem to focus excessively on problems and tensions associated with fringe development, that is in part because much of the literature tends to portray a stereotypical image of the fringe. It is an image of a rural agricultural area with a good land base and closely-knit community, encroached upon by urban interests whose ties remain in the city but whose activities have introduced a host of problems for rural areas (Beesley, 1981). This focus has prompted calls by several writers for new directions in research -- for example, for analysis of communities that have undergone expansion some time ago and may now have 'matured' into socially-integrated settlements (Beesley, 1981); for analysis of the positive interactions that have occurred in the agricultural sector as a result of urbanization (Bryant and Russwurm, 1979; Bryant, 1981); or for more detailed examination of farmers' reactions to exurbanite settlement (McRae, 1981).

2.3 Patterns of Settlement

As noted earlier, development at the urban-rural fringe is not a new phenomenon -- indeed, persistent contiguous development along the inner

fringes of Canadian cities has occurred throughout this century. Similarly, rural residential development has been evident in periods other than just the 1960's and 1970's. At the turn of the century, for example, several communities emerged in municipalities adjacent to Winnipeg, even though the city had ample building lots. People were lured to the new subdivisions by lower taxes, cheaper land, less stringent building regulations, and a streetcar system (Manitoba, Winnipeg Land Prices Inquiry Commission, 1977).

Various types of settlement have occurred: (1) permanent residences (country estates, rural non-farm residences) located on acreages of various sizes and associated with agricultural or aesthetically attractive land; (2) concentrated subdivisions associated with towns and villages in fringe areas; (3) hobby farms generally of larger acreages than country estates; and (4) seasonal residences associated with recreational areas (McRae, 1980; Palubeskie, 1979c).

It must be emphasized that the specific patterns and effects of development vary across the country. Much of the research has focussed on areas such as the St. Lawrence lowlands, southern Ontario, the Edmonton-Calgary corridor, the Okanagan Valleyd and B.C. lower mainland. All have particular characteristics or pressures that shape the nature and effects of fringe development in ways that may be distinct from the experience of other localities. Nonetheless, one common feature of settlement is that it has tended to be random and scattered, often along major transportation routes and often associated with prime agricultural land or high amenity areas. This has contributed to subsequent problems for orderly land development, planning and the provision of public services.

In the Winnipeg region, much of the exurban development pressure has centred on areas north, east and southeast of the city -- including the RMs of Rockwood, East and West St. Paul, St. Andrews, St. Clements, Brokenhead, Springfield, Ritchot and Tache (Barber and Whittle, 1977; Barber and Hathout, 1977, Palubeskie, 1977, 1979b, 1979c; Winnipeg Tri-Level Committee on Urban Affairs, 1978b). Indeed, 1971-1976 census data on migration

within Manitoba to and from Winnipeg show the city experienced a net loss of people to census divisions surrounding it (Winnipeg Tri-Level Committee on Urban Affairs, 1978c). Moreover, the rate of population growth in at least some of these municipalities often exceeded the rate for Winnipeg and the province as a whole (Barber and Hathout, 1977; Winnipeg Tri-Level Committee on Urban Affairs, 1978b).

3.0 FACTORS CONTRIBUTING TO FRINGE DEVELOPMENT

It is evident that geographical factors (location and physical characteristics) are a key to fringe development. Such key geographical concerns include suitable land for building, hobby farming or raising animals; open space for airports, truck terminals, mobile-home parks and campgrounds, refineries, waste disposal sites, or utility facilities; or sites of recreational or historical interest (Gertler and Crowley, 1977; Russwurm, 1977, 1980).

Indeed, studies done in the United States (Fuguitt and Zuiches, 1975; Ilvento and Luloff, 1982) and in Manitoba (Palubeskie, 1979b) point out the importance of proximity to a major urban centre as a factor in preferences for rural or semi-rural locations. This has prompted researchers to note that the back-to-the-land movement, anti-urbanism, and the search for improved quality of life may be qualified values -- while people may not prefer to live in big cities (as numerous surveys over the past two decades have found), few want to live far from one (Fuguitt and Zuiches, 1975).

But geography is not the only factor behind fringe development -- demographic, economic, technological, socio-cultural and public policy factors also are important. Moreover, the interaction of these trends and values over time is complex, as the following discussion should illustrate.

3.1 Demographic Trends

Two developments have caught the attention of North American researchers in recent years. The first is the stabilization or, in some cases, decline of urban population growth. The second is the 'migration turnaround'. This latter development refers to an interruption in the persistent urbanization trend and emergence of what some writers suggest is a trend to 'ruralization' or a net flow of people from urban to rural locations (Ilvento and Luloff, 1982; Marans, 1978; Parenteau, 1980; Robinson, 1981; U.S. Council on Development Choices, 1981).

In the U.S. for example, the rate of population growth of non-metropolitan areas was 4.2% versus a rate of growth of 2.9% in metropolitan populations, between 1970 and 1974. Between 1975 and 1976, non-metropolitan areas gained a net 400,000 people in migration to and from metropolitan areas (Marans, 1978). Alonso (1982) suggests that about half of the non-metropolitan growth has resulted from the overspill of metropolitan functions beyond census definitions. In other words, it is not so much that people have gone back to the land as such, but rather that some now work in the suburban ring or in economic activities that prosper at modest distances from metropolitan centres. The remainder of the growth can be attributed, he suggests, to shifts in the location of labor-intensive industrial activity, growth in the recreation industry, increased investment in energy and environmental projects, increased numbers of elderly persons whose income is not tied to a particular geographical location, and the return of previous outmigrants who find it easier to endure recent economic recessions at home rather than in metropolitan centres.

Canadian census data show that the rural proportion of the total population increased from 24% in 1971 to 24.5% in 1976, and that the rural population during this period grew at an average rate of almost 2% versus the average urban rate of about 1.2% annually (Parenteau, 1980; Robinson, 1981). Indeed, the rural non-farm population, with an average annual rate

of growth of almost 3%, accounted for much of the rural increase (Robinson, 1981).

In Manitoba between 1971 and 1976, the rural non-farm population increased by 18,050 while the rural farm population declined by 6,170, for a net addition to the total rural population of 11,880. This represented 36% of Manitoba's entire population increase during this period. Some but not all of the shift can be attributed to changes in census definitions (Parenteau, 1980).

Winnipeg during this period, experienced a depopulation of its inner city and rapid growth in the suburbs and the fringe. While population declined by 8.8% in the core area, it increased by 7.4% in the outer city and 10.8% in the rural fringe (Winnipeg Tri-Level Committee on Urban Affairs, 1978a). More recent indications are that growth at the fringe has slowed considerably, however (Palubeskie, 1979c; Prevost, 1982).

At the same time, the overall rate of growth of urban centres in Canada has been declining. Thus, population projections made in the 1960's and early 1970's, and the plans and policies based on them, are inappropriate (Gayler, 1982a, 1982b; Robinson, 1981; Winnipeg Draft By-law 2960/81). But planning in an era of stable or declining population growth is not the mirror image of planning in a time of expansion:

> The reality of too much land intended for development, the excess capacity of services already available, competing municipalities and developers hoping for some share of the reduced growth lies behind a facade that all is well and the same potential for growth is both there and necessary. Moreover, the notions of catering for reduced growth through longer staging and greater selectivity of locations are still politically unacceptable to so many who in the past did not have to face such hinderances in realizing certain financial dreams. (Gayler, 1982a, p. 337)

Behind these gross changes in population are several demographic factors, the cumulative implications of which are uncertain. Some of these factors are discussed below in relation to their potential effects on fringe development:

(a) The age profile of the population -- On one hand, the continued impact of the post-war baby-boom generation (and perhaps the baby-boom 'echo') is expected to mean that suburban and fringe areas will remain key growth locations in both Canada and the U.S. in the 1980's (Alonso, 1982; Robinson, 1981; U.S. Council on Development Choices, 1981). In Canada, Robinson (1981) projects that the number of new households will increase at a substantially higher rate than population growth, partly as a result of this generation's impact. On the other hand, the proportion of older persons will be increasing throughout the remainder of this century, due in part again to the impact of the baby-boom generation. What this will mean for the demand for housing, in particular for development in fringe areas, is uncertain. The fact that residential decisions by the elderly need not be based on employment opportunities, the development of retirement communities, and the interests of older persons in the amenities and lifestyle of rural or semi-rural areas, might all contribute to continued dispersal of persons to fringe areas. But the changes in individual and family lifecycles could also contribute to more concentrated forms of settlement. For example, some older persons may seek smaller living units that offer ease of maintenance, group interaction and security; a decreasing ability to commute, coupled with a lack of public transport in outlying areas, could cause migration to concentrated, accessible settlements; or economic conditions could lead to a return to extended family situations (Bunce, 1981a; Ilvento and Luloff, 1982; Preston and Taylor, 1981; Robinson, 1981; Sharpe, 1982; Short, 1982; Steller Jr., 1981).

(b) Changes in household structures -- Several developments are affecting the conventional family structure which in the past has been the mainstay of fringe development. These include: smaller family sizes; increased numbers of single-person and single-parent households; increases in divorce rates, in the number of childless couples and in the average age of family formation and childbearing; increased incidence of co-habitation among unrelated individuals with consequent impact on housing

investment decisions; and the increasing number of families with two or more workers, with the consequent impact on the desire or capacity to commute long distances (Bunce, 1981a; Prevost, 1982; Robinson, 1981; U.S. Council on Development Choices, 1981).

(c) Rural demographics -- Declines in the rural farm population are expected to continue in the 1980's, although the forces that have imposed the adjustments may be moderating (Canada West Foundation Special Task Force, 1980). Health, age, divorce and changing family situation (e.g., no children to take over the farm) have been identified as key factors prompting rural landholders to sell or subdivide their land for non-farm residences (Brown, et al., 1981; Healy and Short, 1979; McCuaig and Manning, 1982). On the other hand, there are indications that non-metropolitan environments are retaining increased numbers of individuals. This trend is perhaps due to economic circumstances that restrict mobility, or to universal social welfare schemes that enable people to stay in their communities (Goldberg and Webster, 1979).

As Bunce (1981a) observes, what all these different factors mean for development at the fringe is not easy to establish. Moreover, those factors that dominate in one province or region may not be all that relevant to another area. Russwurm (1980, p. 469) offers this general projection:

> Whether or not a steady state situation is now developing for country residential development is a moot point. While no studies exist which provide firm evidence, I suggest that no more than 20% of the populace ever desires to live in the open countryside....In addition, during the late 1970's for the first time substantial numbers of country residences will be available for resale as existing families go through changes in the lifecycle. Moreover, population growth is moving towards a steady state. Given these three factors of a demand threshold, an increased supply and a declining growth rate, it can be anticipated that only limited additional demand will occur for more country residential development during the 1980's.

3.2 Economic Factors

Given that the fringe, in particular the inner fringe, will be the site of most future urban development, the competition for land becomes a key economic determinant of the kinds of activity that can occur at the fringe, where it will occur, who will be able to take part in it, who and what activities will be displaced, and what the distribution of the resulting costs and benefits will be.

The initial attraction of land at the fringe is not only its proximity to markets and services in the city but also its generally lower costs (both in land prices and annual taxes), relative to those of the urban centre (Randall, 1981). Moreover, the economics of the aggregate extraction industry require the exploitation of sites relatively close to markets (Ringrose, 1979). Over time, however, the competition for land reflects in rapidly rising land prices, and the increased development activity reflects in rising taxes to support concomitant increases in public services. These outcomes arise from the interplay of demand and supply factors, as well as the interaction of farmers, individuals seeking exurban acreages, speculators, public and private land banks, and other economic actors involved at the fringe (Barber and Whittle, 1977; Brown, et al., 1981; Healy and Short, 1979; Manitoba, Winnipeg Land Prices Inquiry Commission, 1977; Winnipeg Tri-Level Committee on Urban Affairs, 1978b).

Indeed, this competitive activity over land can be detected long before actual development occurs as Brown, et al. (1981, p. 131) found in a study involving more than 700 owners of undeveloped land outside of Calgary, Toronto and four U.S. cities:

> This study shows that because of the opportunity for speculative profits from appreciation in land values, the character of both rural land and of its ownership begin to change more than twenty years before an area is actually urbanized, and long before public policy efforts to influence urban development typically take form.

Moreover, the competitive activity can begin to feed on itself as people move into the market to buy while they can afford land purchases and as a hedge against inflation (Healy and Short, 1979; Manitoba, Winnipeg

Land Prices Inquiry Commission, 1977). As in North America in general during much of the 1970's, land and housing were a superior form of investment in areas of the Winnipeg region -- in particular, in the Winnipeg-Selkirk corridor (Barber and Whittle, 1977; Barber and Hathout, 1977; Healy and Short, 1979; Manitoba Department of Municipal Affairs, 1977a; Manitoba, Winnipeg Land Prices Inquiry Commission, 1977; Winnipeg Department of Environmental Planning, 1978a).

The competition for land had far-reaching implications for the economic viability of farming in fringe areas; for the budgets of school boards and municipal governments; and for the distribution of the associated costs and benefits of development. Moreover, certain dynamics were set in motion that will continue to plague efforts to plan development in the contemporary era of lagging economic performance and population growth.

3.2.1 Urban-Related Economic Factors Behind Exurban Development

During the 1950's in Winnipeg, and elsewhere in Canada, exurban development featured a mix of income groups -- those with higher incomes sought estates in high amenity areas, while those with lower incomes sought cheaper land, lower taxes and often less strict building requirements (Barber and Hathout, 1977; Metropolitan Corporation of Greater Winnipeg, 1963; Russwurm, 1977).

That situation changed from the mid-1960's onward as: (1) an increasing middle- and upper-class affluence enabled individuals to be more mobile and to place lifestyle preferences ahead of economic considerations; and (2) various planning controls (minimum lost sizes, minimum house values or square footage, types of building materials, etc.) were adopted which had the effect of excluding poorer segments of the population from the market (Bunce, 1981a; Barber and Hathout, 1977; University of Manitoba, Department of City Planning, 1974; Russwurm, 1977).

The Winnipeg housing situation in the mid-1970's also had an important role, as demand accelerated and a number of factors intervened to reduce

the ability to supply sufficient serviced lots. As Palubeskie (1979c, p. 54-55) notes:

> Throughout the period of significant city growth, exurban locations compared favorably as a residential choice since they offered rural-small-town atmosphere and larger size lots at prices below or on par with Winnipeg prices. The effect of a tight rental market in the city in the mid 1970's served to increase demand for home ownership which kept housing prices in the city comparatively high. Those conditions fostered a period of boom in the exurban housing market, but have altered significantly in the past two years. The demand for housing in Winnipeg has fallen off dramatically. Developers in the city have substantially over-built. This is aggravated by the fact that Winnipeg is experiencing a significant migration of residents to other provinces. The increase in housing stock and declining demand has resulted in substantially depressed housing prices in the city itself and throughout the Winnipeg region.

Given the poorer economic environment that emerged since this 1979 assessment, it is thought that demand for exurban development has remained at levels much lower than those experienced in the Winnipeg region in the mid 1970's. However, there is a lack of empirical studies on which to test this supposition. Prevost (1982) notes that demand for exurban development had slowed around Winnipeg; in the popular literature, Blicq (1982) also found demand had declined and that in some cases people were returning to the city; in Ontario, Gayler (1982a, 1982b) and Bunce (1981a) have noted a number of economic factors affecting the demand for fringe growth; and in a study of exurbanite settlement in the Ottawa-Montreal axis, McRae (1981) found that a modest number of 'resettlers' had sold their properties and moved from the area, while another small group expressed concerns about the costs of their new experience. McRae observes (p. 46):

> ...Most of the resettlers said that they were satisfied with their move to the rural area; some dissatisfaction, however, had already prompted a few resettlers to leave....The early stage of resettlement covered in the present paper may in fact be dominated by the euphoria of adventure and new experience which could conceivably erode with time and exposure to the day-to-day realities of rural living.

3.2.2 Rural-Related Economic Factors Behind Exurban Development

Competition for rural land has had negative economic repercussions for farmers and other rural residents. But it also has presented them with opportunities. Indeed, communities that had experienced the earlier effects of rural depopulation often welcomed, if not actively encouraged, the new investment (Franson, 1979; Healy and Short, 1979). Rising land values offered an inducement to farmers to subdivide a part of their land, or sell it all -- perhaps to obtain a retirement income, or to overcome a liquidity problem. In addition, the increased land values could be used to secure loans to expand or improve farm operations (Healy and Short, 1979; Magnusson, 1979; Thompson, 1981). Indeed, the market has encouraged subdivision (and, hence, some resistance to large-lot zoning) because of the significant incremental values that could be realized by selling land in smaller parcels (Chicoine, 1981; Manitoba Department of Municipal Affairs, 1977a).

3.2.3 Recent Economic Developments

The economic context for development at the fringe has altered substantially since the mid 1960's to mid 1970's: energy costs have risen sharply; until recent months mortgage and other interest rates were at unprecedented levels; unemployment has increased; farm produce prices have not been bouyant; farm bankruptcies have become a common occurrence; and Winnipeg's economic prospects, on which commuters from the dormitory communities surrounding the city depend for their livelihood, are not particularly bright. However, there is a dearth of empirical work that has assessed the impact of events such as these on fringe development.

On the basis of their Ontario studies, both Bunce(1981a) and Gayler (1982a, 1982b) warn that the dynamics created by earlier private and public investments that were predicated on continued rapid growth in fringe areas, could provide an impetus to maintain existing growth patterns (albeit at a reduced scale) in order to recoup at least some of the past investment. In addition, it can be suggested that the pressures to subdivide land will continue -- motivated, for example, by the desire to obtain improved community services which are only feasible with larger population (Smit and

Flaherty, 1980), or by the need to overcome cash-flow problems being experienced by individual farmers or non-farm residents. Moreover, local governments are faced with the problems and costs of servicing randomly scattered residences without the prospect, in the short-term at least, of being able to encourage more concentrated or in-fill development.

Considerable theoretical attention has been focussed on the potential impact of rising energy prices on fringe development, in particular on the willingness of people to commute daily to urban centres to work. As several authors note, events affecting energy prices and supplies in the past decade have shaken the premises on which fringe development has occurred (i.e. the consequence of such development has been a lifestyle one which is built almost entirely around the automobile, highly energy inefficient) (Hildebrandt-Young & Associates, 1980; Robinson, 1981; Sharpe, 1982).

As Robinson (1981) outlines, there are two distinct schools of thought about the impact of energy prices. On the one hand, some researchers argue that higher prices will draw people back to urban centres or at least to more clustered forms of development. This point of view is premised on the idea that large cities and a concentrated pattern of settlement generally incur lower energy (and fiscal) costs compared to low-density settlement forms. Analyses by van Til (1979) and Hildebrandt-Young & Associates (1980), plus computer modelling applied to the Australian context by Sharpe (1978, 1982), tend to support this school. In terms of more empirical work, a 1979 survey of the builders, developers, architects and other members of the U.S. Urban Land Institute indicated development trends that would favor in-fill projects; smaller-scale, more concentrated patterns of settlement; a reduction in the level of urban sprawl; and, in particular, changes in building, site and transportation design (Byrne, 1979).

The second school of thought, on the other hand, suggests that the relationship between energy efficiency, and the size and density of settlement, is more complex than assumed by the first school. Moreover, dispersed populations could have lower energy costs for a number of reasons. Robinson (1981) suggests that much more research is required to

determine the accuracy of either of these perspectives. Other authors note that, while the shadow of energy costs and shortages has the potential to deflect the process of spatial diffusion, there appears to have been little, if any, abatement of the centrifugal processes depleting urban areas (Sternlieb and Hughes, 1979). In addition, analysis by Thrall (1982) suggests that even though the nominal price of gasoline has increased, the contemporary portion of median income required to purchase a given quantity of fuel is similar to that required when substantial suburbanization occurred in the U.S.

Recent events in world oil markets, and the consequent uncertainty about the future of Canadian energy prices, have served to make projections about the impact of energy costs even more difficult.

3.3 Socio-Cultural Factors Behind Fringe Development

Socio-cultural values generally are thought to have played a major role in the phenomenon of exurban development in the 1960's and 1970's. Numerous surveys pointed to a preference for life in rural, semi-rural or small urban locations as opposed to larger cities (Fuguitt and Zuiches, 1975; Ilvento and Luloff, 1982; Marans, 1978). Studies of actual exurbanites revealed high priority was placed on quality-of-life factors rather than, for example, economic factors (Healy and Short, 1979; Marans, 1978; McRae, 1980, 1981; Palubeskie, 1979b; Paterson Planning and Research Ltd., 1973; University of Manitoba, Department of City Planning, 1974; Winnipeg Department of Environmental Planning, 1978a).

The 'pull' aspects of rural life most frequently cited by exurbanites include: the attractions of the rural atmosphere (e.g., the physical setting, the quiet, the friendly people, more privacy, less crowding, a better place to raise children); proximity to services (schools, other community facilities, public services) and/or to a major urban centre; and lower taxes/cheaper land. Bunce (1981b, p.110) argues that there is an element of nostalgia or mythology associated with these values:

> In general the attraction is to an idealized rather than a real environment: to a product of a mythology which has grown as genuine rural experience fades from our memories. Rural

> sentiment is, in fact, a manifestation of an underlying reverence for rural environment and culture.

The 'push' factors of urban life are less well defined in the Canadian literature, although factors such as crime, pollution, crowding, the hectic pace of life and so on are frequently cited. In the U.S. literature, crime, racial conflict and abandonment of inner cities also are major 'push' factors (Fischer, 1980; Katzman, 1980; Mercer, 1979).

Superimposed on these specific values are the more general notions of individual rights -- in particular, property rights and, by extension, accessibility and service rights (Russwurm, 1977, 1980). It is through the assertion of these rights that land continues to be treated as a commodity rather than as a resource, and that the actions of individuals can collectively produce negative externalities at the rural-urban fringe.

Nonetheless, governments have recognized rural residential development as a legitimate land use (Manitoba, Provincial Land Use Committee of Cabinet, 1980; Winnipeg, Draft By-law 2960/81). Thus, there are continual efforts to manage the tensions and contradictions created by: (a) acceptance of the assertion of individual rights, and the operation of the marketplace; and (b) the desire to protect the overall, long-term public interest through planning and wise resource use (Berry and Plaut, 1978; Martin, 1974; Russwurm, 1977, 1980).

3.3.1 Counter-Trends

The values outlined above are not without their antitheses. First, both exurbanites and longer-established fringe residents can be quick to discover that what they value most about their area -- the rural atmosphere, the lifestyle, the lower taxes -- can become hollow promises under the pressures of urban migration. Indeed, it is not unexpected to find that those exurbanites who arrived earliest on the scene are among the residents most strongly in favor of restrictions on any continuing influx (Russwurm, 1980). In the Winnipeg region, residents surveys have revealed concerns about the pace and impact of exurban settlement and desires to preserve the rural atmosphere through more orderly, concentrated settlement

(Palubeskie, 1979b: University of Manitoba, Department of City Planning, 1974; Winnipeg Department of Environmental Planning, 1978a). Similar attitudes have been detected in municipalities not under the same kinds of development pressures as others. For example, Pitura, etal. (1974) found residents of the Rural Municipality of Macdonald concerned about the retention of their rural-agricultural characteristics and retention of a high amenity area (the La Salle River) for public recreation. In particular, respondents sought stricter controls on the subdivision of farm land for rural residential purposes, while many town dwellers sought gradual controlled growth for their communities.

A second counter-trend to the values giving impetus to fringe development is the strong popular support that has arisen in North America for conservation of natural resources. Since fringe areas provide some of the most accessible environment for urban recreation, there may be strong demands for the maintenance of the fringe in a 'natural' state (Phipps, 1981). Conservationists also may focus on the preservation of farm land, as is evident in the conflicts that have arisen between the Preservation of Agricultural Lands Society, and property developers and local/regional governments in Ontario's Niagara region (Gayler, 1982a; Jackson, 1981).

A third counter-trend is the 'gentrification' or 'back-to-the-city' movement that has been observed in some areas of the U.S. and Canada -- that is, the settlement of middle and higher-income couples and individuals in refurbished older homes, apartments or townhouses in central city neighborhoods (Gale, 1982; Robinson, 1981; Short, 1982; U.S. Council on Development Choices, 1981). Indeed, some public policies have been developed to encourage this trend -- as, for example, in the proposed Plan Winnipeg and complemented by the Winnipeg Core Area Initiative. It is unclear from the literature, however, whether those involved in this movement and the values it reflects can be considered part of the demographic and socio-economic group that just as likely could become exurbanite settlers, or whether they comprise a distinct phenomenon.

3.4 Technology and Fringe Development

The automobile, extensive and well-maintained highway systems, and communications technologies (especially the telephone) are well-known contributors to development at the fringe. What is receiving the increased attention of researchers is the potential impact of the new computer-telecommunications technologies on the pattern of settlement (de Sola Pool, 1982; Robinson, 1981; Sharpe, 1982). Indeed, Manitobans in rural areas already have experienced forerunners of these new technologies in experiments at Headingley and Elie, and through the provision of a computerized information system to farm subscribers.

These new communications systems hold the potential for either further concentration or further dispersion of populations. The tendency in the literature is to project more diffusion. De Sola Pool (1982), for example, notes that for the first time in two centuries the trends in transportation are not parallel to those in communications. In transportation, there is the prospect of rising prices and consequent restrictions on use; while in communications, the prospects are for falling prices and abundance. How far the energy crunch will lead to geographical concentration of activity in urban centres may well depend on the costs of communication services that are sufficient to substitute for travel, De Sola Pool argues.

3.5 The Effects of Public Policy

The presence and, in some cases, the absence of public sector policies and activities can be key factors in the pace and direction of growth in fringe areas. For example:

(1) Hidden subsidies can promote fringe development. These include the provision of extensive and well-maintained highway systems and various public utilities (including toll free telephone service), the costs of which are borne by all taxpayers in the province (Russwurm, 1980). In addition, an array of provincial and federal programs designed to encourage farming activity, including the provision of income and farm property tax breaks, can have the effect of encouraging hobby farming or part-time farming in fringe areas (Thompson, 1981).

(2) A wide range of explicit policy decisions can encourage or discourage fringe development. For example, it is within recent

memory that small communities in Saskatchewan suffering from depopulation offered serviced lots for a dollar, even though the new residents brought with them demands for additional services which the communities often could not afford (Franson, 1979). At the other end of the continuum are policies such as agricultural zoning which, if effectively implemented, prohibit other uses of prime farm land (Bray, 1980; Bryant and Russwurm, 1979; Furuseth and Pierce, 1982). In between are a host of other planning, servicing and regulatory options that in often contradictory ways affect development at the fringe.

(3) Competition among local governments also can be a key factor, especially in an era of declining economic and population growth (Gayler, 1982a, 1982b; Robinson, 1981).

(4) The unanticipated consequences of public policy also play a role. An example in the Winnipeg region is illustrated by this critique of the Additional Zone concept:

> Most will agree the Additional Zone has served its purpose in restricting urban sprawl beyond the immediate urban area. However, from a broader perspective, it has only displaced the phenomenon of urban sprawl to the edges of the Additional Zone. The rural municipalities of St. Andrews, St. Clements, Ritchot and Tache are testimony to the leap-frog movement of urban sprawl beyond the Additional Zone or the city's planning jurisdiction. (Palubeskie, 1977, p. 6).

(5) Co-operation and integrated planning among the various public agencies/governments involved in fringe development are identified in the literature as key public policy needs in order to manage the resources of the fringe in a rational, long-term manner (Jackson, 1981; Russwurm, 1977, 1980; Smit, 1981).

4.0 THE IMPACT OF FRINGE DEVELOPMENT

The dynamics affecting the agricultural sector have emerged as the dominant theme in the literature on urban-rural fringe development in Canada. The concerns centre on the loss of prime farm land to urban development; the effects of the competition for land and rising land prices, on the economic viability of farm operations; and the effects on rural economic infrastructures.

As McRae (1981) notes, the evidence concerning these and other impacts of fringe development often is contradictory. In part, this is due to gaps in the relevant research. But it also is attributable to the multiplicity of actors and processes involved at the fringe, and to the more general socio-economic and political forces which are superimposed on factors specific to fringe areas. Bryant and Russwurm d(1979) argue, for example, that the literature often fails to consider fully the extent to which farming responds to technological and managerial innovations, and changing market demands, that are unrelated to metropolitan influences. Moreover, it can be argued that the evidence is contradictory because perspectives on the same issue can differ -- rising land prices may prohibit the entry of young people into farming, for example, but they offer retiring farmers the opportunity to secure a pension income.

4.1 Effects of Development on the Land and Other Resources

According to Russwurm (1980, p. 476), the essential "problem" in fringe areas is one of better land-use management:

> ...The question is not whether we will have an urban fringe around our cities. Such zones are part of our regional city form. Rather, the question is whether they can become zones in which the land space resource will be increasingly used in a more rational, more optimizing way to benefit both individuals and the collective body at national, provincial and municipal scales.

That the natural environment has not always been used wisely is indicated by the following:

(1) There has been a progressive loss to urban-related development of high capability land for agriculture, forestry and wildlife habitat (Gierman, 1977; Warren and Rump, 1981). Whatever the ecological soundness and aesthetic value of maintaining environmental diversity, preservation of the land for these renewable resource uses often cannot compete with the economic potential of urban land uses when proposed urban developments offer greater income generation (Gayler, 1982a; McRae, 1980, 1981). The effects of development on the loss of resources can be indirect as well as direct. For example, in response to economic pressures, farmers at the fringe tend to engage in more intensive farm practices, perhaps at the expense of forestry or wildlife habitat (Franson, 1979).

(2) Rural amenity areas, or at least public access to such sites, also have been lost to the activities of private developers along river banks, shorelines, escarpments and other scenic places, and at historic or cultural sites (McRae, 1980; Russwurm, 1980).

(3) Conflicts arising from multiple land uses put stresses on the natural resource base. An example is the concern about encroaching residential development and its effects on the habitat and wildlife in Birds Hill Provincial Park, already a highly used recreational facility in the Winnipeg region (Palubeskie, 1979c).

(4) Problems have arisen in attempts to rehabilitate and encourage more rational use of land. In the Winnipeg region, for example, there have been problems enforcing provincial regulations on the rehabilitation of commercial quarries and gravel/sand pits. Fragmented land ownership also has thwarted attempts to consolidate former farm land lying idle but capable of renewed agricultural use (Palubeskie, 1979c; Winnipeg Department of Environmental Planning, 1978a).

(5) Pollution and other types of ecological damage are ever-present possibilities in fringe areas. Disuse or misuse of farm land can

lead to physical or chemical damage to soil (erosion and loss of nutrients), resulting in substantial rehabilitation costs (Thompson, 1981). Rural subdivisions can contribute to problems such as loss of slope stability, altered drainage courses, depletion of groundwater, and ground or surface water pollution from septic tanks (Barber and Hathout, 1977; Thompson, 1981). Waste disposal sites, industrial pollution, and problems associated with vehicular traffic also may put pressure on the environment.

4.1.1 Loss and Fragmentation of Agricultural Land

Various attempts have been made to define the gross loss of rural land to urbanization (Gierman, 1977; Manitoba Department of Municipal Affairs, 1977b; McCuaig and Manning, 1982; Warren and Rump, 1981). But the key issue is the quality or future potential of the land that is converted or otherwise affected by urban processes (Bryant and Russwurm, 1979; McCuaig and Manning, 1982; Thompson, 1981).

Indeed, census data show that the absolute amount of land converted by urban centres decreased in both Canada and Manitoba from 1971 to 1976 as compared to the 1966-1971 period (Warren and Rump, 1981). At first glance, the amount of land involved seems relatively insignificant in the context of Canada's total agricultural capability, increased productivity and product surpluses (Bryant and Russwurm, 1979; McCuaig and Manning, 1982). Moreover, urbanization is not the major factor in farm land loss (Crewson and Reeds, 1982-83; McCuaig and Manning, 1982; Thompson, 1981).

What is crucial, however, is that 61% of the land converted to urban uses in the 1971 to 1976 period had a high capability for agriculture. In the Winnipeg region, for example, the 1,295 hectares subject to conversion were comprised of Canada Land Inventory Classes 2 and 3 agricultural land. Similarly, the 4,385 hectares converted in the 1966-1971 period were classes 2 and 3 land (Warren and Rump, 1981).

There are three important factors related to the urbanization pressures on agricultural land at the fringe. First, unlike the situation

in the United States, a high proportion of Canadian land held by investors and developers is rented out to farmers. Thus, the majority of Canadian fringe acreage continues in agriculture pending development. But the short-term nature of the leases, plus the lack of security of tenure or compensation for investment by the tenant, can contribute to 'mining' of the land due to the lack of incentives for careful management (Brown, et al., 1981; Bryant and Russwurm, 1979; Healy and Short, 1979; Winnipeg Department of Environmental Planning, 1978a).

Secondly, scattered non-farm residential development, and fragmented land tenure, can make agricultural operations on an economically viable scale difficult and can lead to considerable amounts of underutilized land (Barber and Hathout, 1977; Prevost, 1982). Palubeskie (1979c) found, for example, that there were 1,371 vacant but complying rural residential building lots of 80 acres or less in the Rural Municipality of Springfield. Not only did these constitute a planning problem, especially should demand for development surge again in the future, but they also contributed to the formation of transition areas affecting about 25% of the municipality's prime agricultural land. In times of economic and population growth, farms in such areas experience substantial pressures for change in ownership and development. But in times of poor economic performance, the areas are a source of frustration. Previous land sales and land-use conversion have brought about higher taxes, higher assessments, and greater demands for services, while the large number of undeveloped parcels has created uncertainty about future land use.

Thirdly, there is considerable debate in the literature about the impact of hobby and other forms of part-time farming on the efficient use of agricultural land. On the one hand, such types of farming tend to use land less intensively and not to make a significant contribution to commercial agriculture. On the other hand, a developing body of empirical work suggests that such activity is helping to bring idle land back into production, is providing a stabilizing force in land use, and is not reducing the food-producing potential of the land. Indeed, part-time farming is increasing because off-farm income often is vital to the

maintenance of farm viability (Bryant and Russwurm, 1979; Crewson and Reeds, 1982-83; McCuaig and Manning, 1982; McRae, 1980, 1981).

What is viewed as wasteful of land is large-lot zoning (e.g., up to 40 acres) for rural residential purposes (Healy and Short, 1979). Indeed, a number of sources call for more clustered non-farm residential development, preferably on poorer quality land or near existing settlements (Gertler and Crowley, 1977; Healy and Short, 1979; McRae, 1981; Russwurm, 1980).

4.2 Effects on the Viability of Farm Operations

As noted earlier, the demand for development at the fringe, and the consequent rise in land values, offer farmers an opportunity to sell their land to obtain a retirement income or to overcome a liquidity problem. They also provide an opportunity to borrow funds for expansion or improvements on the basis of increased collateral. In addition, the ability to rent from non-farm owners relieves farmers of the need to tie up large amounts of capital in land and, indeed, may be the main option for young persons entering agriculture (Bryant and Russwurm, 1979; Magnusson, 1979). Moreover, while urbanizing influences might force some farmers off of the land, development also may provide innovative market opportunities to others (Bryant, 1981; Reid, 1979).

But development can also introduce a host of potential problems. Farmers may face increased operating costs because of vandalism; damaged or lost animals gone astray through cut fences or opened gates; weight loss in livestock due to the actions of stray dogs; and increased need for weed control. Regulatory restrictions may be placed on livestock operations, farm waste management, hours of machinery use, crop spraying, stubble burning, farm building construction, or the operation of tractors on main roads. Portions of a farmer's property may be expropriated for highway, utility or other projects associated with development. Farmers also may come into conflict with trespassers, illegal hunters, snowmobile operators and other persons using the countryside for recreation. (Berry and Plaut, 1978; Bryant, 1981; McRae, 1980; Parlby, 1979; Russwurm, 1977).

One important effect of rural-urban fringe growth is the uncertainty it can create regarding the long-term future of farm holdings, and of agriculture in general, in the area. This, in turn, can affect farmers' investment decisions and farm productivity (Berry and Plaut, 1978; Bryant, 1981; McRae, 1980, 1981; Walker, 1981).

Relative to the actual or perceived strength of urbanizing forces, farmers may simplify or intensify their arable systems, switch from those types of agriculture requiring long-term investment to other types, reduce their level of fixed investment, reduce their farming activity in anticipation of selling out, combine farming with urban employment or sell their land (Berry and Plaut, 1978; Bryant, 1981; Thompson, 1981).

On the basis of his studies in townships in the Toronto region, Walker (1981) suggests it is possible for farmers and rural society to do relatively well even in a heavily urbanized environment. But one key factor in this has been the formation of regional municipalities which have stabilized the local political/governmental system and developed more coherent planning guidelines. In addition, farmers in some townships still have a strong political voice. Where the political landscape is less stable, or authorities vacillate on the issues, uncertainty can prevail, as Walker found in the Vaughan and Mississauga areas.

The effects of uncertainty and anticipation can ripple out beyond the immediate peripheries of cities into the urban shadow and field, perhaps even further. A number of farmers in the Calgary area, for example, have sold their land and substantially increased holdings in the Peace River region (Parlby, 1979). Indeed, farmers in fringe areas

> ...may decide to sell to non-farmers and move to areas where farmland prices are still determined by agricultural use. This latter reaction, in turn, may raise land values in areas presently outside the urban shadow. (McRae, 1980, p. 11).

4.2.1 Land Values, Property Taxes and Intergenerational Land Transfers

Agriculture may be a 'best use' of land in the context of resource management principles and the long-term public interest. Often, however,

it is not a competitive activity in the shorter-term context of the operations of the economic system, where the concepts of 'highest use' and of land as a commodity prevail.

As the potential value of urban and recreational uses is capitalized into higher land prices, farmers can face several problems: (1) their ability to expand operations, or to effect intergenerational transfers of farm land, may be reduced because they are unable to afford the higher prices; (2) there are added pressures on some farmers to sell because of the opportunity costs of keeping the land in agriculture; (3) there may be inducement to subdivide at least part of the land in order to maintain a viable operation or to help finance intergenerational land transfers; and (4) the ripple effects may extend to land prices beyond the urban shadow (Brown, et al., 1981; Chicoine, 1981; McRae, 1980, 1981; Parlby, 1979; Reid, 1979).

The upward pressures on prices are most intense in those locations with greater proximity to urban centres and with the greatest likelihood of imminent development (Brown, et al., 1981; Chicoine, 1981). These are the areas where the influence of speculators and developers on land turnovers and prices may be most apparent, and where the pressures are greatest on individual landholders to sell (Barber and Whittle, 1977; Brown, et al., 1981).

It should be emphasized, however, that there are many factors that determine the value of land (Chicaine, 1981). Moreover, Brown, et al., (1981) found in their study of two Canadian and four U.S. cities that demographic factors played an important, if not the major, role in the decisions of landowners to sell their property (e.g., factors such as age, or family reasons, or lifecycle stage).

For farmers who do not leave, one ongoing expense arising from increased land values relates to property taxation. Two effects are involved: (1) the value of the farm land may reflect in increased assessment; and (2) municipal/school board mill rates may increase due to the additional services brought on by exurbanite settlement and other types

of development. Thus, higher mill rates are applied to higher assessments (Manitoba Assessment Review Committee, 1982; Russwurm, 1977, 1980; van Vuuren and Cumming, 1978).

4.3 Effects of Low Density Residential Development

A number of impacts already have been noted -- for example, the effects on agricultural operations of scattered residential land parcels and of residents' demands for restrictions on farm practices; the ability of urbanites to bid up the price of land given that even at the higher prices, it may still be cheaper than land in urban centres; and the potential environmental disruptions that can occur from rural subdivisions. Two related issues, however, are especially problematic: (1) the provision of expanded public services (schools, roads, road maintenance, snow clearing, police and fire protection, garbage disposal, and so on) to accommodate the new development; and (2) inequities between those who pay for the additional services and those who benefit (Palubeskie, 1979c; Russwurm, 1977, 1980; van Vuuren and Cumming, 1978).

> Generally, urbanites living in the country receive more services than they pay for while the farmer pays for more than he receives. Increasingly tax rebates and other techniques are being used to redress this imbalance....With sprawl-type development, the costs of specific services may be two or three times as high per household as for compact development....Usually the costs of services provided are spread over the entire municipality. Consequently some people are subsidizing uneconomic services for others and equity between services received and taxes paid falls by the wayside. (Russwurm, 1980, p. 489)

Indeed, even with a 50% provincial tax rebate, it was found that farmers in an Ontario township were paying 1.6 times more for services (excluding regionally provided education) than non-farm residential owners (Bryant and Russwurm, 1979). In the Rural Municipality of Springfield in Masnitoba, Palubeskie (1979c) found that in 1978 farm land and buildings comprised some 43% of the total assessment, and that on a per household basis the tax contributions of farmers had a moderating effect on the property tax of non-farm residents.

4.4 Impact on Rural and Urban Economies

This is among a number of areas of urban-rural fringe development identified in the literature as requiring much more research.

In terms of rural economies, exurban settlement and other forms of fringe development can help revitalize communities, as McRae (1981) found in a study of resettlement in an area of eastern Ontario/western Quebec. But the kinds of services and goods required by non-farm residents may differ considerably from those of farmers. As demand shifts to these other economic activities, and as the number of farmers in the area declines, agricultural support services may become unviable and be withdrawn (McRae, 1980, 1981). Moreover, demands for new commercial, professional and other services may go unmet because there is not a sufficient population to justify new ventures (Palubeskie, 1979b). Or, in periods when resettlement pressures slacken, the non-farm economy of rural areas can suffer (McRae, 1981).

In one of the few detailed empirical studies on the subject, Ironside and Williams (1980) sought to compare the spending patterns of exurbanites in the Edmonton region. They focussed on commuters and non-commuters in four settlements around that city, and on country residential households in two municipalities. In general, they found that commuter expenditures were significant contributors to the community economies. However, those employed in Edmonton tended to spend less in their own communities than did non-commuting households. In addition, of all those studied, the country residential population was the most dependent on Edmonton for goods and services.

In terms of urban economies, there also is a lack of knowledge about the impacts of population shifts to outer areas (Winnipeg Tri-Level Committee on Urban Affairs, 1978a). The Ironside-Williams (1980) study would seem to indicate the continued patronage of city-based commercial, professional and other services, albeit at a reduced level compared to the previous total expenditures by exurbanites. On the other hand, outmigration erodes a city's tax base; the commuters become 'net absorbers'

of city services because they utilize the service infrastructure without providing tax payments in return; as well, the decentralization of growth can lead to the need for new or additional infrastructure while, at the same time, leaving some of the existing infrastructure underutilized (Winnipeg Tri-Level Committee on Urban Affairs, 1978a, 1978b).

4.5 Socio-Cultural Impact of Fringe Development

Again, this is an area identified as requiring much more research. What literature is available suggests there is much potential for conflict between exurbanites and the longer-established residents of rural communities (Healy and Short, 1979; McRae, 1980; Russwurm, 1977, 1980). Some of these result from incompatible land uses; others from different perspectives of the land as an amenity or as an economic resource; still other conflicts stem from individuals seeking to asseert their property rights regardless of the externalities that may result for adjacent land/landowners.

On the other hand, it should be noted that McRae (1981) found some evidence of social integration and co-operation in his study of eastern Ontario/western Quebec exurbanite resettlement. Moreover, Bryant and Russwurm (1979) propose that there is a threshold of country residential development below which such development presents no conflicts with agriculture and can provide beneficial results for community integration and revitalization. If agriculture can be retained in a viable state, and if the increase in country residential development is steady rather than sudden, the social and political advantages are likely to outweigh the disadvantages, they suggest.

5.0 POLICY RESPONSES TO FRINGE DEVELOPMENT

Recognition of the undesirable consequences of urban-rural fringe development has prompted a variety of policy responses. In recent years, these have focussed on: (1) efforts to protect agricultural land and the viability of farm operations; (2) attempts to engage in more comprehensive land-use planning; (3) a search for the most appropriate geo-political and administrative structures to implement more coherent planning policies; and (4) acknowledgement of rural residential development as a legitimate land use but, given the problems that such development can entail, also proposals and plans to control more carefully the pattern of such settlement and, if possible, to direct it to existing centres or more concentrated forms of settlement (Barber and Hathout, 1977; Berry and Plaut, 1978; Furuseth and Pierce, 1982; Gertler and Crowley, 1977; Manitoba Provincial Land Use Committee of Cabinet, 1980; Palubeskie, 1979a, 1979c; Russwurm, 1977, 1980; Selkirk and District Planning Area Board, 1981).

Nevertheless, the efficacy of such policy thrusts, or of their implementation, has been questioned. For example, previous and sometimes contrary provincial and municipal policies may lead to settlement patterns that thwart subsequent planning efforts, as Palubeskie (1979c) found in Springfield. (In this case a large number of vacant but complying building lots in the municipality made any effort at containment of development an elusive one, at least in the short term.) Moreover, attempts at containment or more clustered settlement in one jurisdiction may only encourage leap-frog development in areas where such controls are absent; or they may create more pressures on the countryside for recreational purposes (Barber and Hathout, 1977; Bryant and Russwurm, 1979). In the case of the agricultural sector, policies to deal with problems related to fringe development cannot be divorced from those aimed at the general viability of the industry.

> The agricultural industry must be viable in terms of satisfactory returns on capital investment and labor. Agricultural land use problems associated with urbanization pressures represent income

> problems; whenever farmers can earn enough to approximate urban incomes, agriculture will stand a better chance of prosperity whether near cities or elsewhere. (Bryant and Russwurm, 1979, p. 133)

Moreover, there are the persistent problems associated with the inherent conflict between individual property rights and planning controls:

> We have sufficient legislation on the books in most provinces to control land space resource activities in the urban fringe to almost any degree desired. We have basically not chosen to do so because of two factors related to land viewed primarily as a commodity rather than a resource. One is the attitude that private land ownership carries with it the right to develop that land. The other is that individual owners should be compensated should this right to develop be denied....Problems connected with land ownership and land use lie at the heart of all problems involved in wisely using the potential inherent in our urban fringe land. Land speculation, land use conflicts, environmental impacts, agricultural impacts are clearly linked with our closely guarded rights to land as private property. (Russwurm, 1977, p. 97).

5.1 Traditional Policies

Zoning, subdivision controls and annexation/amalgamation are among the traditional instruments applied to development at the urban-rural fringe.

Annexation can be a particularly controversial action, as demonstrated in recent years in Alberta where both Calgary and Edmonton have annexed considerable portions of land from surrounding municipalities (Plunkett and Lightbody, 1982; Thompson, 1981). In Manitoba, territory was annexed by Brandon in the early 1970's and the City of Winnipeg contemplated extension of its boundaries in the late 1970's (Everitt and Stadel, 1981; Moses, 1979). However, such a policy response to problems at the urban-rural fringe has been criticized as only a temporary solution that deals with the symptoms of problems, not their causes (Everitt and Stadel, 1981; Russwurm, 1977). Moreover, additional negative consequences may arise -- land may be left idle prior to development or it may be left vacant because it is not suitable for development; annexation does not guarantee growth will occur in an accretionary, planned manner; and annexation does not encourage

efficient use of the vacant land within the former urban boundaries (Thompson, 1981).

Zoning and subdivision controls also can be a source of political conflict (Proudfoot, 1981; Smit and Flaherty, 1980). Their effectiveness can also be limited. In terms of conflicts, Everitt and Stadel (1981) show, for example, how zoning by one municipality was used to try to contradict the purposes of Brandon's annexation. Moreover, the pressures for rezoning (e.g., from those who wish to capture the values of increasing land prices) may be intense on local authorities (Chicoine, 1981). In addition, even though subdivision controls have been substantially tightened in Manitoba, Alberta and other provinces in recent years, some authors argue that the effectiveness of these actions remains questionable (Prevost, 1982; Thompson, 1981). Brown, et al. (1981) assert that regional subdivision controls extending far beyond the built-up perimeter are necessary to maintain large land parcels for agriculture. But such controls may only facilitate the banking of tracts of land by corporate interests since individual purchasers may be priced out of the market. As well, farmers experiencing a cash-flow shortage may be forced to sell their entire holdings if they are unable to subdivide a portion to improve their liquidity situation.

Large-lot zoning has been used in Manitoba and other provinces to try to control rural residential development, maintain the rural character of fringe areas, ensure that the residences have self-contained water and sewage facilities, and to obtain a higher assessment/tax return from these properties. It has been argued that these policies have served to encourage rather than discourage, rural residential settlement, and that they have provided the impetus for future subdivision pressures from the owners (Barber and Hathout, 1977; Smit and Flaherty,1980).

5.2 Taxation Policies

Preferential tax treatment is one of the most common tools used in the U.S. and Canada to try to encourage the retention of land in agriculture. Most programs involve a form of differential or use value tax in which special classes of property are taxed at the current (use) value rather

than at the higher ad valorem value. Many schemes have a recapture component to them whereby a rollback tax must be paid on conversion of the land to urban uses (Berry and Plaut, 1978; Brown, et al., 1981; Furuseth and Pierce, 1982). Some programs utilize restrictive agreements under which farmers are committed to keep their land in agriculture for a specific period. Another variation, used in Wisconsin and Michigan, scales the annual tax reduction according to income and property tax burden (Brown, et al., 1981; Furuseth and Pierce, 1982).

Manitoba does not have a preferential system. However, one has been recommended by the Manitoba Assessment Review Committee (1982) that would include provision for a five-year rollback tax on conversion of the land. Further, to deter premature requests for rezoning, the committee proposes a similar deferred tax scheme for agricultural land zoned for other uses.

Assessments of preferential schemes indicate that their impact is limited in that, by themselves, the offer insufficient inducement to keep land in agriculture if there are strong 'bid rents' for urban development. In addition, these schemes often benefit speculators or developers who own fringe land but rent it to farmers for agricultural use pending development (Berry and Plaut, 1978; Brown, et al., 1981; Furuseth and Pierce, 1982).

A second type of tax exemption offered by several provinces and states is a waiver of special assessments so that certain types of agricultural land are not taxed for the cost of urban infrastructural facilities (Furuseth and Pierce, 1982).

Land speculation taxes designed to capture some of the capital gains resulting fromn the short-term holding and sale of land are used in Ontario and some other jurisdictions. However, as Brown, et al. (1981) found, this type of tax does not affect most holders of fringe land, including those holding land for speculative purposes, since most investment activity is of a relatively long-term nature. Nearly 60% of the parcels included in their survey had been held by the same owner for 10 years or more. In addition, they argue that eliminating speculative activity may have minimal impact on

fringe land prices since the main component of price increases is the greater value of the land in urban rather than rural use.

Land value or site value taxes, hoarding charges, and betterment taxes (designed to recoup some of the gains accruing from rezoning or other forms of community action), are among the proposals that have been made in an effort to arrive at fiscal inducements that will lead to better land use (Bird and Slack, 1981; Martin, 1974; Russwurm, 1980).

5.3 Agricultural Zones and Districts

British Columbia, Quebec and Newfoundland, plus a number of American states, have adopted some form of exclusive agricultural zoning in order to protect farm land from conversion to other uses (Berry and Plaut, 1978; Bray, 1980; Furuseth and Pierce, 1982; Maguire, 1979; Pierce, 1981).

B.C., with its narrow, fertile intermontane valleys under intense pressure for non-farm uses, introduced an agricultural land reserves (ALR) program in the early 1970's (along with a corollary farm income assurance program to provide income protection for farmers operating under an ALR plan).[1] Analysis of the program has indicated that it brought about a major shift in the location of new residential and commercial development, and that improved farmer confidence led to increased investment, farm expansion and new farm formation. In an analysis of the impact of the system on the Vernon area, however, Maguire (1979) concludes that ALRs by themselves are inadequate to resist intense pressures for urban development in agricultural zones. Bray (1980) notes that the program has not ensured that land is actually used for agricultural production. Indeed, some land has been left idle because the returns from farming were insignificant in relation to the costs of the capital investment in land purchased at prices reflecting its value under urban subdivision. Pierce (1981) concludes a study of the applications for exclusion of land from ALRs with a warning that continued incremental decision-making by the B.C. Agricultural Land Commission could threaten the objectives of the ALR program. While exclusions granted up to 1978 had not yet posed a threat to the reserve, the rate of approvals, and the disproportionate number of applications

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1 This section was written prior to the B.C. restraint program introduced in July 1983.

received from certain key areas of the province could lead to problems, Pierce argues.

5.4 Regional, Provincial and National Land-Use Planning

Several authors conclude their analyses of the dynamics of development at the urban-rural fringe with a call for more comprehensive and integrated settlement and land-use planning at the federal, provincial, regional and local government levels (Gertler and Crowley, 1977; Jackson, 1981; Robinson, 1981; Russwurm, 1980; Smit, 1981). Their essential argument is that a systems approach is necessary to ensure that future development is compatible with long-term human and environmental requirements. Priority should be placed on: (1) more detailed assessment of the Canadian land base than is currently available; (2) the establishment of much stronger public controls over the pace, location and nature of settlement and other development activities; and (3) development of the appropriate institutional structures required for the implementation of coherent land-use and development plans. For models to guide the reform process, these authors frequently point to the kinds of planning and programming implemented by the public sector in Great Britain, France, Sweden and other countries in Western Europe.

It has been noted that a number of Canadian provinces have redefined their rights to land-use controls in municipalities and unincorporated areas -- retrieving some of the powers that they had previously delegated to local authorities (Furuseth and Pierce, 1982). The establishment of land use commissions in B.C., Quebec and Newfoundland, the adoption of new planning legislation and land-use policies in several provinces, and the regional planning models offered by Ontario and Alberta, are identified as positive developments in land management.

Nevertheless, Russwurm (1980) argues, a key gap in Canadian institutional structures is the lack of unitary planning and single legal units encompassing both the urban fringe and the built-up city. Cities, he notes, must be dealt with and planned as regions, and these city regions must be part of more general provincial plans.

On the other hand, some writers warn that establishment of a supra-organizational structure is no panacea. Thompson (1981), for example, offers a critique of the regional planning commissions in Alberta while Gayler (1982a, 1982b) discusses the problems that can arise from inter-municipal rivalry under the regional municipality system in Ontario.

5.5 Other Policy Responses

A variety of proposals have been made, and programs implemented, to effect land-use policy objectives. For example, the purchase by public sector agencies of the development rights associated with land has occurred in some states in the U.S. (Berry and Plaut, 1978; Furuseth and Pierce, 1982). By separating these rights from the property, the government has left the landowner free to continue agricultural practices or other land uses that would otherwise not be competitive under urbanization pressures. Saskatchewan's agricultural land banking program, and Saskatoon's urban land bank, also are frequently cited as important innovations (Berry and Plaut, 1978; Furuseth and Pierce, 1982; Martin, 1974). But, to be effective, both land banks and purchases of development rights require large amounts of capital to cover sufficiently large agricultural resources (Furuseth and Pierce, 1982).

Two French programs have attracted attentiond: (1) legislation to encourage non-farm ownership of agricultural land in order to reduce the need for farmers to commit large sums of capital to land purchases (Bryant and Russwurm, 1979); and (2) a pre-emption of farm sales program to permit local intervention in a private market sale to ensure that the land continues to be used for agricultural purposes (Berry and Plaut, 1978).

The concept of transferable development rights has received considerable theoretical attention but has proven very difficult to put into practice (Berry and Plaut, 1978; Randall, 1981; Raymond, 1981). Nonetheless, researchers continue to examine its potential for implementation. This is because of its attractiveness as a means of accommodating development pressures while, at the same time, providing for preservation of designated natural or built environments and reducing the

inequities between landowners prevented from converting their land and those who gain from more intensive development of their holdings.

6.0 DEVELOPMENT IN THE WINNIPEG REGION

As indicated earlier in this paper, the efficacy of the Additional Zone concept, which extends the planning jurisdiction of the City of Winnipeg into adjacent municipalities, has come under question.

First, it has been argued that the concept is "a compromise that satisfies nobody" (Selwood, et al., 1981). On the other hand, however, the city's control over development has been limited to the zone while exurban settlement has jumped beyond the zone's outer boundaries. Moreover, under the City of Winnipeg Act and a 1974 provincial government interpretation of that legislation, the city's planning responsibilities over the zone have been diffused to provide for more control by the municipal councils over zoning amendments, subdivision approvals and district plans (Palubeskie, 1977; Winnipeg Department of Environmental Planning, 1982). The zone muncipalities feel, however, they are still not masters in their own house; at least some of them have sought planning autonomy as a result (Palubeskie, 1979c; Selwood, et al., 1981; Winnipeg Department of Environmental Planning, 1982).

Secondly, there has been no comprehensive review of the Additional Zone components of the Greater Winnipeg Development Plan and By-law 422/73 (Winnipeg Department of Environmental Planning, 1982). The Minister for Urban Affairs, in an October 27, 1982 letter to Mayor William Norrie, called on the city to undertake a comprehensive review of the matters affecting the municipalities in the Additional Zone, in consultation with all interested parties (Winnipeg, Minutes of the City of Winnipeg Council, November 17, 1982).

Thirdly, the relevant provisions of the Provincial Planning Act, as these relate to the city's jurisdiction in the Additional Zone and to the development of plans by adjacent municipalities/planning districts, have been the subject of ongoing concern since their passage in 1975. Two main problems have been raised: (1) the city is excluded from the district planning process and thus has no formal input, except appearance at public hearings, into the planning decisions that may occur in adjacent municipalities; and (2) Additional Zone municipalities which join planning districts can opt out of the zone, as occurred with Rosser in 1980 (Selwood, et al., 1981).

> Unfortunately, its (the Planning Act's) implementation in the Winnipeg fringe has backfired. Rather than bringing about positive and co-ordinated approaches to development, its effect so far has been to generate new conflicts and intensify old ones.
>
> Four areas of concern....have been identified. First, there is a lack of systems perspective in the Planning Act as it applies to the Winnipeg region; second, the province's commitment to co-ordinated planning has been ambivalent, particularly with regard to financing; third, a dichotomy exists between a real decentralization of planning authority and empty rhetoric concerning local autonomy; and fourth, delays and conflicts have resulted from differing interpretations of the PLUC (Provincial Land Use Committee) guidelines. (Selwood, et al., 1981, p. 406-407).

Fourthly, questions have been raised about the effectiveness of the liaison between the city and the Additional Zone municipalities; about the role of the Ad Hoc Committee on the Additional Zone (which takes its mandate from the Committee on Environment); and about the appropriateness of a broader regional planning mechanism/authority for the Winnipeg region (Palubeskie, 1977).

7.0 CONCLUDING REMARKS

As indicated in the previous sections of this paper, the dynamics behind development at the urban-rural fringe are composed of multiple, often contradictory 'pushes' and 'pulls'. The outcome of this tug-of-war for a given locality at a given time is difficult to predict. After several years of rapid expansion, there are indications that development along Winnipeg's fringe has slowed considerably. Moreover, with Plan Winnipeg, the city intends to redirect at least a portion of its future development inward rather than outward. Do these factors mean that the fringe is a 'dead issue'?

Speaking in general rather than Winnipeg-specific terms, at least two analysts suggest that the answer to that question is no. Robinson (1981) argues that the present circumstances of slower economic and population growth in Canada offer opportunities to redress some of the difficulties arising from past periods of rapid growth and to undertake new initiatives. In his assessment of planning problems in the Niagara region, Gayler (1982b) argues that the changing circumstances provide an opportunity to plan for more compact urban areas and to protect farm land.

Thus, the current environment may provide a useful 'window' to reassess urban-rural fringe development, a window that would be difficult to create in the midst of another round of rapid growth in fringe areas.

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